

09/578,693
Updated Search
L/Cook 1/7/05

d his

(FILE 'HOME' ENTERED AT 11:03:00 ON 07 JAN 2005)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, CANCERLIT, JAPIO' ENTERED AT
11:03:18 ON 07 JAN 2005

L1	16 S (PLASMA FABP)
L2	6 DUPLICATE REMOVE L1 (10 DUPLICATES REMOVED)
L3	0 S L2 AND LIVER?
L4	352 S (LIVER FABP)
L5	23 S L4 AND PLASMA?
L6	10 DUPLICATE REMOVE L5 (13 DUPLICATES REMOVED)

=>

d his

(FILE 'HOME' ENTERED AT 11:03:00 ON 07 JAN 2005)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, CANCERLIT, JAPIO' ENTERED AT
11:03:18 ON 07 JAN 2005

L1	16 S (PLASMA FABP)
L2	6 DUPLICATE REMOVE L1 (10 DUPLICATES REMOVED)
L3	0 S L2 AND LIVER?
L4	352 S (LIVER FABP)
L5	23 S L4 AND PLASMA?
L6	10 DUPLICATE REMOVE L5 (13 DUPLICATES REMOVED)

=>

AN 1989:241079 BIOSIS
DN PREV198987122144; BA87:122144
TI DISTRIBUTION OF FATTY ACID BINDING PROTEINS IN TISSUES AND **PLASMA**
OF GALLUS-DOMESTICUS.
AU COLLINS D M [Reprint author]; HARGIS P S
CS DEP POULTRY SCI, TEX AGRIC EXPERIMENT STATION, TEX A AND M UNIV SYSTEM,
COLLEGE STATION, TEX 77843-2472, USA
SO Comparative Biochemistry and Physiology B, (1989) Vol. 92, No. 2, pp.
283-290.
CODEN: CBPBB8. ISSN: 0305-0491.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 20 May 1989
Last Updated on STN: 20 May 1989
AB 1. Fatty acid binding activity associated with a 14,000-15,000 mol. wt
protein was observed in the cytosolic fraction of liver, duodenum,
myocardium, adipose pectoral and gastrocnemius muscles of chickens. 2.
Polyclonal antisera prepared against chicken liver fatty acid binding
protein exhibited affinity for only liver **FABP** and a
14,000 mol. wt fatty acid binding protein in the intestine. 3. A fatty
acid binding protein was not detected in chicken **plasma**.
CC Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Lipids 10066
Biophysics - Molecular properties and macromolecules 10506
Metabolism - Proteins, peptides and amino acids 13012
Digestive system - Physiology and biochemistry 14004
Cardiovascular system - Physiology and biochemistry 14504
Blood - Blood and lymph studies 15002
Muscle - Physiology and biochemistry 17504
Bones, joints, fasciae, connective and adipose tissue - Physiology and
biochemistry 18004
IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport
and Circulation); Cardiovascular System (Transport and Circulation);
Digestive System (Ingestion and Assimilation); Metabolism; Muscular
System (Movement and Support); Skeletal System (Movement and Support)
IT Miscellaneous Descriptors
LIVER DUODENUM MYOCARDIUM MUSCLE BINDING SPECIFICITY
ORGN Classifier
Galliformes 85536
Super Taxa
Aves; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Birds, Chordates, Nonhuman Vertebrates, Vertebrates

AN 1989:241079 BIOSIS
DN PREV198987122144; BA87:122144
TI DISTRIBUTION OF FATTY ACID BINDING PROTEINS IN TISSUES AND **PLASMA**
OF GALLUS-DOMESTICUS.
AU COLLINS D M [Reprint author]; HARGIS P S
CS DEP POULTRY SCI, TEX AGRIC EXPERIMENT STATION, TEX A AND M UNIV SYSTEM,
COLLEGE STATION, TEX 77843-2472, USA
SO Comparative Biochemistry and Physiology B, (1989) Vol. 92, No. 2, pp.
283-290.
CODEN: CBPBB8. ISSN: 0305-0491.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 20 May 1989
Last Updated on STN: 20 May 1989
AB 1. Fatty acid binding activity associated with a 14,000-15,000 mol. wt
protein was observed in the cytosolic fraction of liver, duodenum,
myocardium, adipose pectoral and gastrocnemius muscles of chickens. 2.
Polyclonal antisera prepared against chicken liver fatty acid binding
protein exhibited affinity for only liver **FABP** and a
14,000 mol. wt fatty acid binding protein in the intestine. 3. A fatty
acid binding protein was not detected in chicken **plasma**.
CC Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Lipids 10066
Biophysics - Molecular properties and macromolecules 10506
Metabolism - Proteins, peptides and amino acids 13012
Digestive system - Physiology and biochemistry 14004
Cardiovascular system - Physiology and biochemistry 14504
Blood - Blood and lymph studies 15002
Muscle - Physiology and biochemistry 17504
Bones, joints, fasciae, connective and adipose tissue - Physiology and
biochemistry 18004
IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport
and Circulation); Cardiovascular System (Transport and Circulation);
Digestive System (Ingestion and Assimilation); Metabolism; Muscular
System (Movement and Support); Skeletal System (Movement and Support)
IT Miscellaneous Descriptors
LIVER DUODENUM MYOCARDIUM MUSCLE BINDING SPECIFICITY
ORGN Classifier
Galliformes 85536
Super Taxa
Aves; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Birds, Chordates, Nonhuman Vertebrates, Vertebrates

AN 1997:305166 BIOSIS
DN PREV199799612969
TI Fatty acid binding proteins reduce 15-lipoxygenase-induced oxygenation of
linoleic acid and arachidonic acid.
AU Ek, Bengt A. [Reprint author]; Cistola, David P.; Hamilton, James A.;
Kaduce, Terry L.; Spector, Arthur A.
CS Dep. Biochem., Univ. Iowa, College Med., Iowa City, IA 52242, USA
SO Biochimica et Biophysica Acta, (1997) Vol. 1346, No. 1, pp. 75-85.
CODEN: BBACAQ. ISSN: 0006-3002.
DT Article
LA English
ED Entered STN: 26 Jul 1997
Last Updated on STN: 26 Jul 1997
AB Free fatty acids in **plasma** and cells are mainly bound to
membranes and proteins such as albumin and fatty acid binding proteins
(FABP), which can regulate their biological activities and metabolic
transformations. We have investigated the effect of FABP and albumin on
the peroxidation of linoleic acid (18:2) and arachidonic acid (20:4) by
15-lipoxygenase (15-LO). Rabbit reticulocyte 15-LO produced a rapid
conversion of (1-14C)18:2 to 13-hydroxyoctadecadienoic acid (13-HODE) and
(3H)20:4 to 15-hydroxyeicosatetraenoic acid (15-HETE). 13-HODE formation
was reduced when intestinal FABP (I-FABP), **liver FABP**
(L-FABP) or albumin was added. The relative ability of these proteins to
reduce 15-LO induced formation of 13-HODE and 15-HETE was BSA gt L-FABP gt
I-FABP. Smaller reductions in activity were observed with 20:4 as
compared to 18:2. The IC-50-values of I-FABP and L-FABP, using either
18:2 (3.4 AM) or 20:4 (3.4 mu-M), were 4.6 +- 0.6 and 1.9 +- 0.2 AM,
respectively, for reduction of 13-HODE and 6.8 +- 0.3 and 3.1 +- 0.2 mu-M,
respectively, for reduction of 15-HETE formation. The smaller 15-HETE
reduction correlated with decreased binding of 20:4 to the FABP.
Titration calorimetry also showed that the I-FABP IC-50 for 18:2, 0.25
mu-M, was lower then for 20:4, 0.6 mu-M. Thus the reduction in fatty acid
lipid peroxidation relates to the binding capacity of each FABP. We also
demonstrated that 18:2 rapidly diffuses (flip-flops) across the
phospholipid bilayer of small unilamellar vesicles (SUV) and measured
partitioning of 18:2 between proteins and SUV by the pyranin fluorescence
method (Kamp, F. and Hamilton, J.A. (1992) Proc. Natl. Acad. Sci.
U.S.A. 89, 11367-11370). Addition of proteins to SUV in buffer resulted
in a complete desorption of 18:2 from SUV with a relative effect of BSA gt
L-FABP gt I-FABP. This suggests that the relative effects of these
proteins on 18:2 peroxidation will not be altered by the presence of
membranes. Our results indicate that FABPs protect intracellular
polyunsaturated fatty acids against peroxidation and, through differential
binding of 18:2 and 20:4, they may modulate the availability of these
polyunsaturated fatty acids to intracellular oxidative pathways.
CC Cytology - Animal 02506
Biochemistry studies - Lipids 10066
Biophysics - Membrane phenomena 10508
Enzymes - Chemical and physical 10806
Metabolism - Lipids 13006
IT Major Concepts
Biochemistry and Molecular Biophysics; Cell Biology; Enzymology
(Biochemistry and Molecular Biophysics); Membranes (Cell Biology);
Metabolism
IT Chemicals & Biochemicals
15-LIPOXYGENASE; LINOLEIC ACID; ARACHIDONIC ACID
IT Miscellaneous Descriptors
ARACHIDONIC ACID; FATTY ACID; FATTY ACID-BINDING PROTEIN; LINOLEIC
ACID; LIPID; MEMBRANES; METABOLISM; OXIDATION; OXYGENATION;
15-LIPOXYGENASE

AN 1997:305166 BIOSIS
DN PREV199799612969
TI Fatty acid binding proteins reduce 15-lipoxygenase-induced oxygenation of
linoleic acid and arachidonic acid.
AU Ek, Bengt A. [Reprint author]; Cistola, David P.; Hamilton, James A.;
Kaduce, Terry L.; Spector, Arthur A.
CS Dep. Biochem., Univ. Iowa, College Med., Iowa City, IA 52242, USA
SO Biochimica et Biophysica Acta, (1997) Vol. 1346, No. 1, pp. 75-85.
CODEN: BBACAQ. ISSN: 0006-3002.
DT Article
LA English
ED Entered STN: 26 Jul 1997
Last Updated on STN: 26 Jul 1997
AB Free fatty acids in **plasma** and cells are mainly bound to
membranes and proteins such as albumin and fatty acid binding proteins
(FABP), which can regulate their biological activities and metabolic
transformations. We have investigated the effect of FABP and albumin on
the peroxidation of linoleic acid (18:2) and arachidonic acid (20:4) by
15-lipoxygenase (15-LO). Rabbit reticulocyte 15-LO produced a rapid
conversion of (1-14C)18:2 to 13-hydroxyoctadecadienoic acid (13-HODE) and
(3H)20:4 to 15-hydroxyeicosatetraenoic acid (15-HETE). 13-HODE formation
was reduced when intestinal FABP (I-FABP), **liver FABP**
(L-FABP) or albumin was added. The relative ability of these proteins to
reduce 15-LO induced formation of 13-HODE and 15-HETE was BSA gt L-FABP gt
I-FABP. Smaller reductions in activity were observed with 20:4 as
compared to 18:2. The IC-50-values of I-FABP and L-FABP, using either
18:2 (3.4 AM) or 20:4 (3.4 mu-M), were 4.6 +- 0.6 and 1.9 +- 0.2 AM,
respectively, for reduction of 13-HODE and 6.8 +- 0.3 and 3.1 +- 0.2 mu-M,
respectively, for reduction of 15-HETE formation. The smaller 15-HETE
reduction correlated with decreased binding of 20:4 to the FABP.
Titration calorimetry also showed that the I-FABP IC-50 for 18:2, 0.25
mu-M, was lower then for 20:4, 0.6 mu-M. Thus the reduction in fatty acid
lipid peroxidation relates to the binding capacity of each FABP. We also
demonstrated that 18:2 rapidly diffuses (flip-flops) across the
phospholipid bilayer of small unilamellar vesicles (SUV) and measured
partitioning of 18:2 between proteins and SUV by the pyranin fluorescence
method (Kamp, F. and Hamilton, J.A. (1992) Proc. Natl. Acad. Sci.
U.S.A. 89, 11367-11370). Addition of proteins to SUV in buffer resulted
in a complete desorption of 18:2 from SUV with a relative effect of BSA gt
L-FABP gt I-FABP. This suggests that the relative effects of these
proteins on 18:2 peroxidation will not be altered by the presence of
membranes. Our results indicate that FABPs protect intracellular
polyunsaturated fatty acids against peroxidation and, through differential
binding of 18:2 and 20:4, they may modulate the availability of these
polyunsaturated fatty acids to intracellular oxidative pathways.
CC Cytology - Animal 02506
Biochemistry studies - Lipids 10066
Biophysics - Membrane phenomena 10508
Enzymes - Chemical and physical 10806
Metabolism - Lipids 13006
IT Major Concepts
Biochemistry and Molecular Biophysics; Cell Biology; Enzymology
(Biochemistry and Molecular Biophysics); Membranes (Cell Biology);
Metabolism
IT Chemicals & Biochemicals
15-LIPOXYGENASE; LINOLEIC ACID; ARACHIDONIC ACID
IT Miscellaneous Descriptors
ARACHIDONIC ACID; FATTY ACID; FATTY ACID-BINDING PROTEIN; LINOLEIC
ACID; LIPID; MEMBRANES; METABOLISM; OXIDATION; OXYGENATION;
15-LIPOXYGENASE

ORGN Classifier

Leporidae 86040

Super Taxa

Lagomorpha; Mammalia; Vertebrata; Chordata; Animalia

Organism Name

rabbit

Taxa Notes

Animals, Chordates, Lagomorphs, Mammals, Nonhuman Vertebrates, Nonhuman
Mammals, Vertebrates

RN 82249-77-2 (15-LIPOXYGENASE)

60-33-3 (LINOLEIC ACID)

506-32-1 (ARACHIDONIC ACID)

L6 ANSWER 4 OF 10 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on

ORGN Classifier
Leporidae 86040
Super Taxa
Lagomorpha; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
rabbit
Taxa Notes
Animals, Chordates, Lagomorphs, Mammals, Nonhuman Vertebrates, Nonhuman
Mammals, Vertebrates
RN 82249-77-2 (15-LIPOXYGENASE)
60-33-3 (LINOLEIC ACID)
506-32-1 (ARACHIDONIC ACID)

L6 ANSWER 4 OF 10 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on

AN 2003:81756 BIOSIS

DN PREV200300081756

TI **Plasma** concentration of intestinal- and **liver-**
FABP in neonates suffering from necrotizing enterocolitis and in
healthy preterm neonates.

AU Guthmann, Florian [Reprint Author]; Boerchers, Torsten; Wolfrum,
Christian; Wustrack, Thomas; Bartholomaeus, Sabine; Spener, Friedrich

CS Department of Neonatology, Charite Campus Mitte, D-10098, Berlin, Germany
florian.guthmann@charite.de

SO Molecular and Cellular Biochemistry, (October 2002) Vol. 239, No. 1-2, pp.
227-234. print.

ISSN: 0300-8177 (ISSN print).

DT Article

LA English

ED Entered STN: 6 Feb 2003

Last Updated on STN: 6 Feb 2003

AB Both early diagnostic and prognostic assessment of the acute abdomen in
preterm infants are hampered by the lack of a sensitive and specific
parameter for intestinal injury. In this prospective clinical study we
wanted to estimate the value of intestinal (I-) and liver (L-) fatty acid
binding protein (FABP) in diagnosing necrotizing enterocolitis (NEC).
Using highly sensitive and specific sandwich ELISAs which employ
recombinant human I- and L-FABP as standard proteins (limit of detection
0.1 ng/ml **plasma**), the L-FABP concentration (median 7.6 ng/ml)
was determined to be about 3 fold that of I-FABP (median 2.52 ng/ml) in
plasma of healthy preterm infants. I- and L-FABP concentrations
significantly increased with birth weight (1.6 and 5.0 ng/ml per kg,
respectively). At onset of symptoms, I-FABP concentration was
significantly higher in infants who later developed severe NEC compared to
healthy infants and those, whose illness remained confined to stage I or
II. L-FABP was significantly elevated compared to the control group at
onset of symptoms regardless of the further course of NEC. In conclusion,
I-FABP appears to be a specific parameter for early detection of
intestinal injury leading to severe NEC stage III. L-FABP, however, is a
promising sensitive marker even for stage I of NEC.

CC Pathology - Diagnostic 12504

Digestive system - Physiology and biochemistry 14004

Digestive system - Pathology 14006

Blood - Blood and lymph studies 15002

Blood - Blood cell studies 15004

Pediatrics 25000

Medical and clinical microbiology - Bacteriology 36002

IT Major Concepts

Gastroenterology (Human Medicine, Medical Sciences); Infection;

Pediatrics (Human Medicine, Medical Sciences)

IT Parts, Structures, & Systems of Organisms

intestine: digestive system; **plasma**: blood and lymphatics

IT Diseases

necrotizing enterocolitis: bacterial disease, digestive system disease,
diagnosis

Enterocolitis, Necrotizing (MeSH)

IT Chemicals & Biochemicals

intestinal-fatty acid binding protein

ORGN Classifier

Hominidae 86215

Super Taxa

Primates; Mammalia; Vertebrata; Chordata; Animalia

Organism Name

human (common): newborn, premature

Taxa Notes

AN 2003:81756 BIOSIS

DN PREV200300081756

TI **Plasma** concentration of intestinal- and liver-
FABP in neonates suffering from necrotizing enterocolitis and in
healthy preterm neonates.

AU Guthmann, Florian [Reprint Author]; Boerchers, Torsten; Wolfrum,
Christian; Wustrack, Thomas; Bartholomaeus, Sabine; Spener, Friedrich

CS Department of Neonatology, Charite Campus Mitte, D-10098, Berlin, Germany
florian.guthmann@charite.de

SO Molecular and Cellular Biochemistry, (October 2002) Vol. 239, No. 1-2, pp.
227-234. print.

ISSN: 0300-8177 (ISSN print).

DT Article

LA English

ED Entered STN: 6 Feb 2003

Last Updated on STN: 6 Feb 2003

AB Both early diagnostic and prognostic assessment of the acute abdomen in
preterm infants are hampered by the lack of a sensitive and specific
parameter for intestinal injury. In this prospective clinical study we
wanted to estimate the value of intestinal (I-) and liver (L-) fatty acid
binding protein (FABP) in diagnosing necrotizing enterocolitis (NEC).
Using highly sensitive and specific sandwich ELISAs which employ
recombinant human I- and L-FABP as standard proteins (limit of detection
0.1 ng/ml **plasma**), the L-FABP concentration (median 7.6 ng/ml)
was determined to be about 3 fold that of I-FABP (median 2.52 ng/ml) in
plasma of healthy preterm infants. I- and L-FABP concentrations
significantly increased with birth weight (1.6 and 5.0 ng/ml per kg,
respectively). At onset of symptoms, I-FABP concentration was
significantly higher in infants who later developed severe NEC compared to
healthy infants and those, whose illness remained confined to stage I or
II. L-FABP was significantly elevated compared to the control group at
onset of symptoms regardless of the further course of NEC. In conclusion,
I-FABP appears to be a specific parameter for early detection of
intestinal injury leading to severe NEC stage III. L-FABP, however, is a
promising sensitive marker even for stage I of NEC.

CC Pathology - Diagnostic 12504

Digestive system - Physiology and biochemistry 14004

Digestive system - Pathology 14006

Blood - Blood and lymph studies 15002

Blood - Blood cell studies 15004

Pediatrics 25000

Medical and clinical microbiology - Bacteriology 36002

IT Major Concepts

Gastroenterology (Human Medicine, Medical Sciences); Infection;
Pediatrics (Human Medicine, Medical Sciences)

IT Parts, Structures, & Systems of Organisms

intestine: digestive system; **plasma**: blood and lymphatics

IT Diseases

necrotizing enterocolitis: bacterial disease, digestive system disease,
diagnosis

Enterocolitis, Necrotizing (MeSH)

IT Chemicals & Biochemicals

intestinal-fatty acid binding protein

ORGN Classifier

Hominidae 86215

Super Taxa

Primates; Mammalia; Vertebrata; Chordata; Animalia

Organism Name

human (common): newborn, premature

Taxa Notes

Animals, Chordates, Humans, Mammals, Primates, Vertebrates

Animals, Chordates, Humans, Mammals, Primates, Vertebrates